Hoesch isowelle® & Hoesch isowand vario®

Smooth transitions in modern architecture can be combined with innovative sandwich systems

A company
of ThyssenKrupp
Steel

ThyssenKrupp Bausysteme

ThyssenKrupp

Hoesch isowelle®
Hoesch isowand vario®

ThyssenKrupp Bausysteme

The variable element permits the problem-free combination of two innovatory products, namely Hoesch isowand vario® und Hoesch isowelle®

The Hoesch isowelle® facade element is supplied in ready-to-mount form and - thanks to its characteristic geometry - makes possible the creation of modern, homogeneous wall surfaces. The construction width is 1000 mm while it can be supplied in lengths up to 20 m; in practical terms this means fewer transverse joints and brings about in this way cost savings through short mounting times.
Hoesch isowelle® can be laid both horizontally and vertically and - in combination with the concealed fixing facility - offers great scope in design terms whereby this can extended still further when use is made of the opportunity to combine Hoesch isowelle® with Hoesch isowand vario®.
With the aid of ThyssenKrupp Bausysteme's wide range of colours, architectonically attractive colours can be realized presenting a real opportunity for buildings to be designed and produced that are not only functionally mature but also extraordinarily attractive.

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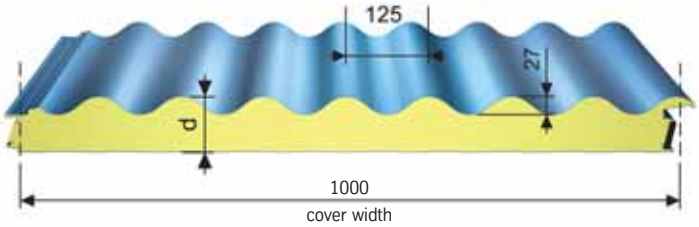
Technical data Hoesch isowelle®

Area of application: facades

- Optically sophisticated design, individual character, attractive eye-catcher
- Excellent thermal insulation, energy cost savings
- Vapourtight metal facings, low heat losses
- Supplied ready-to-mount, short mounting times, low mounting costs
- Direct groove-and-tongue link with Hoesch isowand vario®, optical highlighting of particular areas of a building, breaking-up / relieving of large wall areas
- Low weight, easy and quick to mount,
- Able to be laid horizontally or vertically, opportunities for individual designs
- Large effective spans, cost savings for substructure
- Metal facings of strip-galvanized and coated steel, excellent corrosion protection, long service life, opportunity for coloured designs



Designation of building element	Element thickness d	Material thickness outer sheet t_N	Material thickness inner sheet t_N	Max. length supplied	Weight	Thermal resistance R*	Heat transfer coefficient U*	Thermal resistance R_D**	Heat transfer coefficient U**
	mm	mm	mm	m	kg/m²	m²K/W	W/m²K	m²K/W	W/m²K
Hoesch isowelle®	64	0.60	0.75	20	14.5	2.11	0.44	2.10	0.51
	84				15.3	2.98	0.32	2.95	0.36
	104				16.1	3.85	0.25	3.85	0.27

* calculation acc. to EN ISO 6946
** calculation acc. to EN 13 165 taking account of the joints acc. to EN 14 509

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Hoesch isowelle®
Hoesch isowand vario®

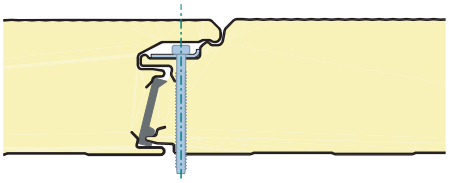
ThyssenKrupp Bausysteme

Joints

The precise-fit joints offer the following advantages:

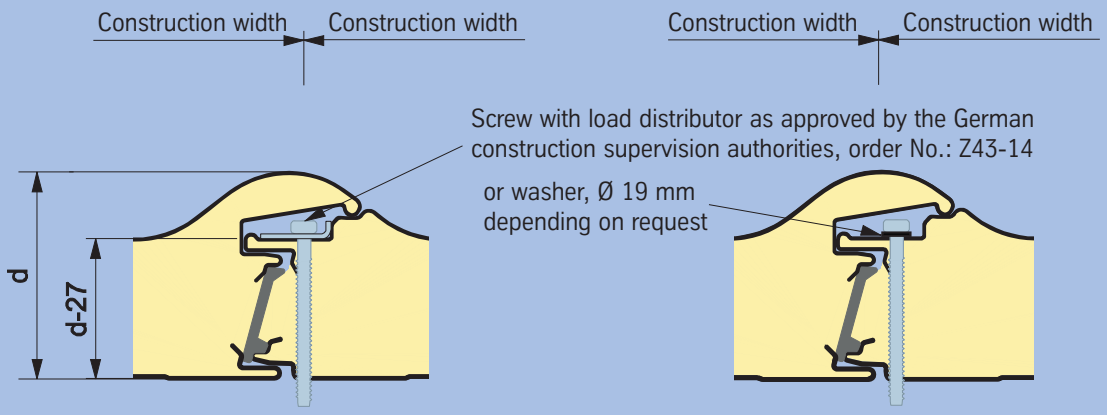
- Sealing strip inserted in our works, high air-tightness, low ventilation heat losses (German Thermal Protection Order
- Optionally with concealed fixing facility, no disruption of lines, with defined stop and screwing auxiliary slot, problemfree mounting

Hoesch isowand vario®



concealed fastening

Securing with concealed fixing system



Hot-dip enhancing

The corrosion protection of the elements is carried out in accordance with DIN 55928-8 as follows:
The metal facings are given a metallic alloy protective layer consisting of 95 % zinc and 5 % aluminium. This hot-dip enhanced steel strip with the designation **GALFAN®** provides unambiguously better corrosion protection than the conventional hot-dip galvanized steel strip.

The brief designation of **GALFAN®** is: ZA 2559.
On the exposed side this corresponds to layer group 255.
Thanks to the special alloy composition, not only the shaping properties of the material but also the adhesion of the succeeding plastic coatings are improved.

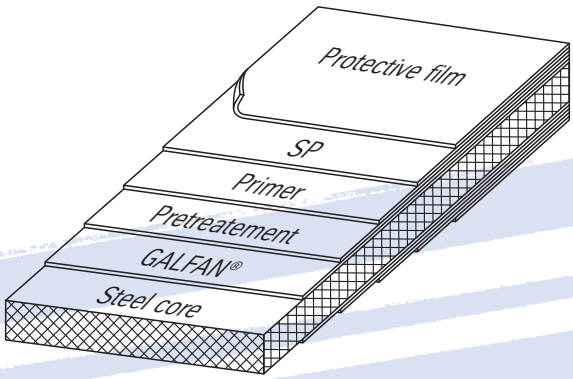
Coating systems

To match the corrosion protection to particular requirements and also to permit coloured designs, the hot-dip enhanced steel strip for the metal facings is given an additional coating.

To permit rapid delivery times, we hold the steel strip coated with the high-quality coating system **PLADUR® SP** at a layer thickness of 25 mm in stock in the popular colours for the outer metal facing.

Similarly the steel strip for the outer metal facing coated with the **PLADUR® PVDF** coating system is also held in stock in the most popular colours.
Further colours from the **PLADUR® PVDF** and **SP** coating systems can also be supplied on request.
The inner metal facing is given the **PLADUR® DU** coating system in the SP (polyester) paint system (layer thickness 15 µm).

B SP



Protective film

In order to ensure that the high quality standard of the Hoesch isowelle® elements is safeguarded, they are always supplied with protective film on the outer metal facing.

This protects the element during production, shipment and storage as well as during mounting from dirt and damage.

Important:

Components with protective film should be mounted without delay.

The protective film should be removed completely in the course of the mounting work but in any case not later than 6 weeks after the production date.

Mounting

Regulations / guide-lines

Amongst others, the following regulations / guide-lines are to be observed:

- German general construction supervision authority approval Z-10.4-345, sandwich elements
- This Hoesch isowelle® prospectus
- Accident protection regulations of the employer's liability insurance associations
- Guide-line for the mounting of section steel panels for roof, wall and floor structures, publisher: IFBS, Info 8.01
- References in the project statistics and order-related laying plans
- Mounting recommendations of ThyssenKrupp Bausysteme

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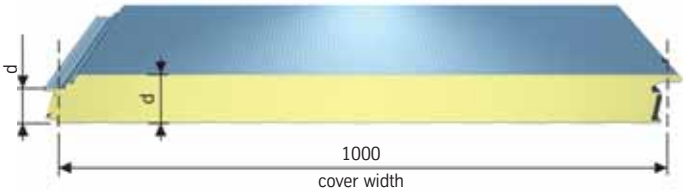
Technical data Hoesch isowand vario®

Product properties:

- Precise-fit joint geometry with sealing strip inserted in our works
- With concealed securing system
- With defined stop and screwing auxiliary slot
- Low weight
- Excellent thermal insulation through PUR core
- Large effective spans
- Supplied ready-to-mount
- Metal facings of strip-coated GALFAN® steel strip
- Alternative metal facing materials on request
- German general construction supervision authority approval Z-10.4-345
- Special elements for corners and attic connections available



Profiling of cover sheet	Slightly profiled (L)	Microprofiled (M)	V-profiled (V)
Outer sheet	●	●	●
Inner sheet	●		

● = available

Designation of building element	Element thickness d	Material thickness outer sheet t_N	Material thickness inner sheet t_N	Max. length supplied	Weight	Thermal resistance R*	Heat transfer coefficient U*	Thermal resistance R_D**	Heat transfer coefficient U**
	mm	mm	mm	m	kg/m²	m²K/W	W/m²K	m²K/W	W/m²K
Hoesch isowand vario®	60	0.50	0.50	20	11.3	2.57	0.37	2.55	0.42
	80				12.1	3.43	0.28	3.40	0.30
	100				12.9	4.30	0.22	4.30	0.24

* calculation acc. to EN ISO 6946
** calculation acc. to EN 13 165 taking account of the joints acc. to EN 14 509

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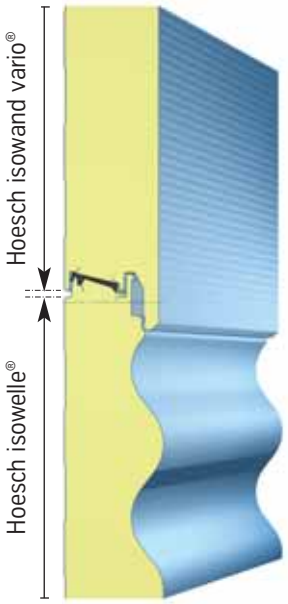
Hoesch isowelle® and Hoesch isowand vario® – the basis for modern building designs. Here two TKS-BAU innovations are able to be combined for the first time.

- An optically sophisticated design results from the combination of Hoesch isowelle® and Hoesch isowand vario®



- Both horizontal and vertical mounting of the elements is possible with this combination without any problem

- In the case of special requirements in respect of fire protection, use of the combination jointly with Hoesch isorock® vario is possible - subject to certain conditions being fulfilled - thanks to the identical external appearance.

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TÜV MANAGEMENT SERVICE ISO 9001

BAUELEMENTE AUS STAHLBLECH RAL Gütezeichen

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